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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/725,360	11/29/2000	Brian Unitt	476-1961	1250
7590	08/18/2004		EXAMINER	
Lee, Mann, Smith, McWilliams, Sweeney & Ohlson P.O. Box 2786 Chicago, IL 60690-2786			MARCELO, MELVIN C	
			ART UNIT	PAPER NUMBER
			2663	

DATE MAILED: 08/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/725,360	UNITT ET AL.
	Examiner Melvin Marcelo	Art Unit 2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
**THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 29 November 2000.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-21 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-21 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 29 November 2000 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1.2</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 14-17 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14, lines 6-7, it is not clear whether "the transmitted control channels" should be --the transmitted content channels-- in order to conform with line 3.

Claims 16 and 17 are omnibus claims in that these claims do not delineate the parameters of the claimed subject matter.

Claim 21, line 1, "the control signals" lack a proper antecedent basis since only one control signal is recited in claims 21 and 19.

### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 16, 17 and 19-21 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. It is not clear what is the statutory class of invention of claims 16 and 17. Is it a process or machine? Also, applicant should specify what is the statutory class of a "control signal" as claimed in claims 19-21 in order clarify what applicant is intending to protect as their claimed subject matter.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1,2,4-8,10,11,14,15 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by Lewis et al. (US 6,009,099 A).

In Lewis, the network access unit is the Optical Network Unit CMU 20 in the Figure, which corresponds to applicants ONU 30 in applicants' Figure 1. With respect to the claims below, references to the prior art appear in parenthesis.

1. *A network access unit (Lewis, Optical Network Unit CMU 20) for restricting user access to signals (Column 2, lines 32-36) transmitted on a local access network (Access Network CRU 18) and comprising:*

*a port for receiving a channel request from a user (AAL5 port, column 2, lines 29-32); a channel request vetting unit for vetting the request with respect to a predetermined list of permitted channels (It is inherent for there to be a list of permitted channels in order for the CMU 20 to determine which channels are authorized and which are unauthorized and must be skipped, column 2, lines 32-36); a transmitter for forwarding the channel request responsive to the vetting (Channel request is sent/forwarded up the network, column 2, lines 44-47).*

2. *A network access unit according to claim 1 additionally comprising:*

*a receiver arranged to receive control signals from a network headend for updating the permitted list (CMU 20 receives control signals in response to the request in order to update the permitted channel list, column 2, lines 49-55 and column 3, lines 17-*

**48; these signals are uplink from the CMU such that the Digital Multicast Bank can be considered the headend of the network).**

*4. A network access unit according to claim 1 in which the local access network is a shared medium access network (**Access Network CRU 18** is shared by a plurality of Optical Network Units CMU 20s).*

*5. A network access unit according to claim 1 arranged to receive signals over an optical medium (**Optical Network Unit CMU 20**).*

*6. A customer premises equipment comprising a network access unit according to claim 1 (**Optical Network Unit CMU 20** is associated with Set Top 22 which is located at the customer premise).*

*7. An optical access network comprising a network access unit according to claim 1 (**Optical Network Unit CMU 20**).*

*8. A service provider server (**Video Information Providers 12**) arranged for connection to a network (**Access Network CRU 18**) and comprising:  
a transmitter for transmitting one or more content channels (**Providers 12 transmits video information for the content channels, column 2, lines 61-64**) and channel control signals to a remote network access unit containing a permitted channel list (**Provider 12 transmits channel control signals in order to authorized a set top to receive a requested channel, column 3, line 33 to column 4, line 2**; it is inherent that the CMU 20 receives a permitted channel list or authorization list in order for the CMU 20 to distinguish between authorized channels and unauthorized channels for a particular set top unit 22, column 2, lines 24-43);  
in which the control signals are intended to update the permitted channel list so as to control subscriber access to the transmitted content channels (**Provider 12 uses the control signals to update a video channel authorization list for requesting set top unit 24, column 3, line 67 to column 4, line 2**).*

*10. A method of restricting user access to signals transmitted on a local access network (**Lewis, Figure 1**) comprising the steps of:  
receiving a channel request from a user at a first port (**AAL5 port, column 2, lines 29-32**);*

*vetting the request with respect to a predetermined list of permitted channels* (**Permitted channels are authorized channels, column 2, lines 32-36**); *forwarding the request responsive to the vetting* (**Authorization procedure, column 2, lines 35-36 and lines 44-47**).

11. *A method according to claim 10 additionally comprising the steps of:* *receiving a control signal from a network headend* (**Digital Multicast Bank 16 is at the headend, while Set Tops 22 are downlink at the customer premises**); *updating the permitted list responsive to the control signal* (**Control signals from the headend updates the authorized channel list, column 3, line 67 to column 4, line 2, which inherently updates the authorized channel list at the CMU 20, column 2, lines 32-36**).

14. *A method of operating a service provider server* (**Video Information Provider 12**) *comprising the steps of:*

*transmitting one or more content channels and channel control signals* (**Column 3, line 33 to column 4, line 2**) *to a remote network access unit* (**CMU 20 inherently contains a permitted channel list in order to distinguish authorized channels from unauthorized channels for a set top unit 22, column 2, lines 32-36**) *containing a permitted channel list*;

*in which the control signals are intended to update the permitted channel list so as to control subscriber access to the transmitted control channels* (**The control signals updates a video channel authorization list which corresponds to a permitted channel list, column 3, line 67 to column 4, line 2**).

15. *A method according to claim 14 additionally comprising the steps of:* *receiving a user initiated request to change channel subscription details* (**Column 3, lines 16-32**);

*transmitting a permitted channel list update signal responsive thereto to a remote network access unit associated with the user* (**CMU 20 inherently receives an update signal to the permitted channel list in order to distinguish authorized channels from unauthorized channels for a set top unit 22, column 2, lines 32-36**).

19. *A control signal intended for transmission to a network access unit*

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*having a permitted channel list, comprising at least one message comprising network access unit permitted channel list update information (Authorization update messages in column 3, line 49 to column 4, line 2, wherein it is inherent that the CMU 20 receives this message in order to distinguish authorized channels from unauthorized channels for a set top unit 22, column 2, lines 32-36).*

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims 3,9,12,18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis et al.

Lewis does not explicitly teach associating time with a channel in a predetermined list of channels. However, Lewis does appear to implicitly teach that time is associated with those channels that are "on-demand video channels".

*Set top unit 22 would request any one of a plurality of on-demand video channels and video information provider 12 responds with an authorization update and a particular channel which is appropriate at the time for starting the on-demand program. (column 3, lines 43-48)*

On-demand programs appear to be single time programs on a particular channel in which a user requests reception at a particular time such as a boxing match or pay per view movie, rather than requests for a particular channel such as HBO which is not time dependent in terms of its authorization for a particular program. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to associate time with channels in the predetermined list of channels and the channel

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vetting process since Lewis teaches that authorization update for on-demand programming contains an appropriate starting time at which time the CMU would have determined that the set top unit is authorized to receive the particular channel (Column 2, lines 32-36) and that the set top unit is unauthorized at other times to receive the particular channel.

3. A network access unit according to claim 1 additionally in which a time is associated with at least one channel in the predetermined list of channels and in which the channel vetting unit vets a request for the at least one channel with respect to the time.

9. A service provider server according to claim 8 in which the control signals contain time-related information for association in the permitted list with one or more channels.

12. A method according to claim 10 where additionally comprising the steps of:

associating a time with at least one channel in the predetermined list of channels;

vetting the request with respect to the time.

20. A control signal according to claim 19 in which the at least one message contains time-related information for association in the permitted channel list with one or more channels (**The control signal is the authorization update signal**).

With respect to claim 18, it would have been obvious to incorporate the method of claim 10 into a computer program since a skilled artisan would have been motivated to use an easily distributable form for their invention in order to market it.

18. A program for a computer on a machine readable medium arranged to:

receive a channel request from a user at a first port;

vet the request with respect to a predetermined list of permitted

*channels;*

*forward the request responsive to the vetting.*

9. Claims 13, 16, 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lewis et al. in view of Bhagavath et al. (EP 994600 A2). Lewis does not teach using an IGMP message. However, Bhagavath teaches that IGMP messages are standard protocol messages used with multicast routers (column 2, lines 1-4). In Lewis, the Digital Multicast Bank 16 is a multicast router in that it routes messages between the Video Information Providers 12 and the Set Top Units 22. Therefore, it would have been obvious to use IGMP messages in conjunction with the Digital Multicast Bank in Lewis for the reason that IGMP messages are standard protocol messages used with multicast routers as taught by Bhagavath.

13. *A method according to claim 10 in which the channel request is carried in an IGMP message.*

16. *A use of an IGMP vetting function in customer premises equipment to provide secure multicast over a network (Lewis is secure in that channel requests must be vetted in order to determine whether the set top unit is authorized to receive the channel).*

17. *A use of an IGMP vetting function and a network receive address filter in customer premises equipment to provide secure multicast over a network (The network receive address filter is inherent at the Set Top Unit 22 in order to receive messages intended for the particular set top, column 2, lines 25-28 and 36-43).*

21. *A control signal according to claim 19 in which the control signals comprise IGMP messages.*

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melvin Marcelo whose telephone number is 703-305-4373. The examiner can normally be reached on Mon-Fri 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melvin Marcelo  
Primary Examiner  
Art Unit 2663

August 13, 2004